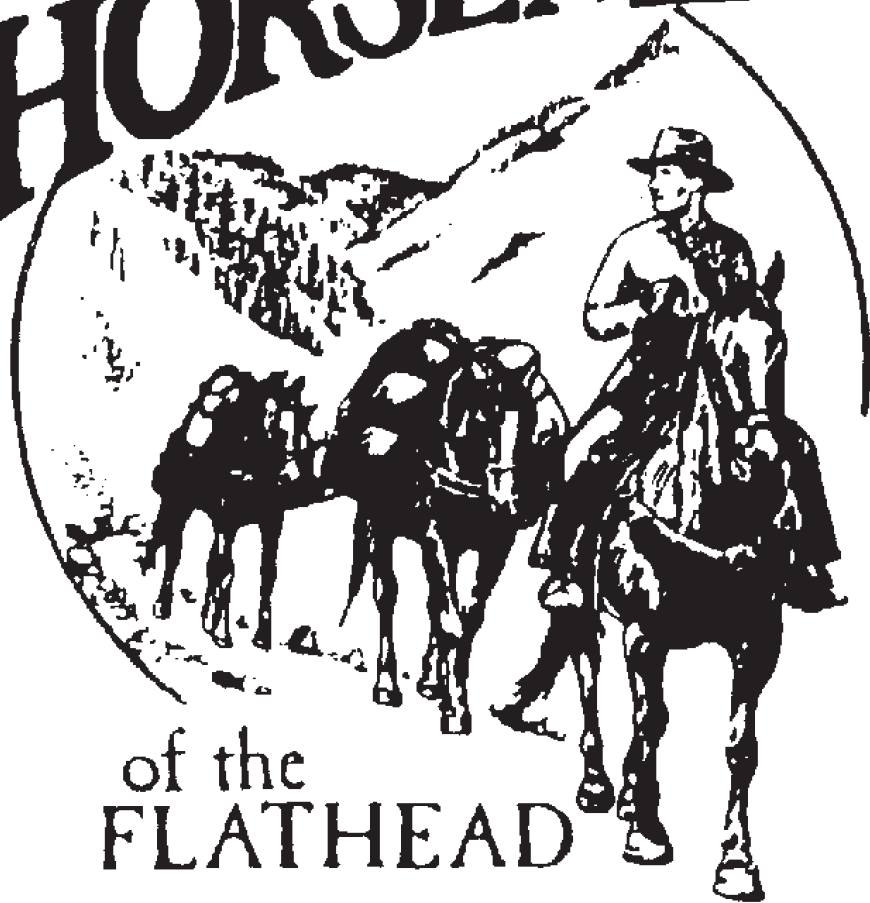
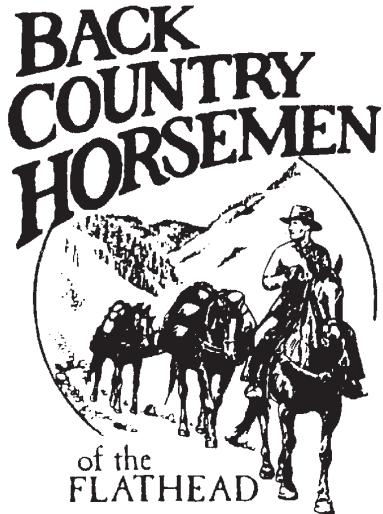


BACK COUNTRY HORSEMEN



of the
FLATHEAD

A 501(c)3 Non-profit Organization



A 501(c)3 Non-profit Organization

BACK COUNTRY HORSEMEN of the FLATHEAD

is a service organization formed in 1973.

OUR PURPOSE is to perpetuate enjoyable common sense use of horses in the back country; assist government agencies in maintenance and management of the resource; and educate, encourage and solicit active public participation in wise and sustaining use of horses and use by people commensurate with our heritage and the back country resource.

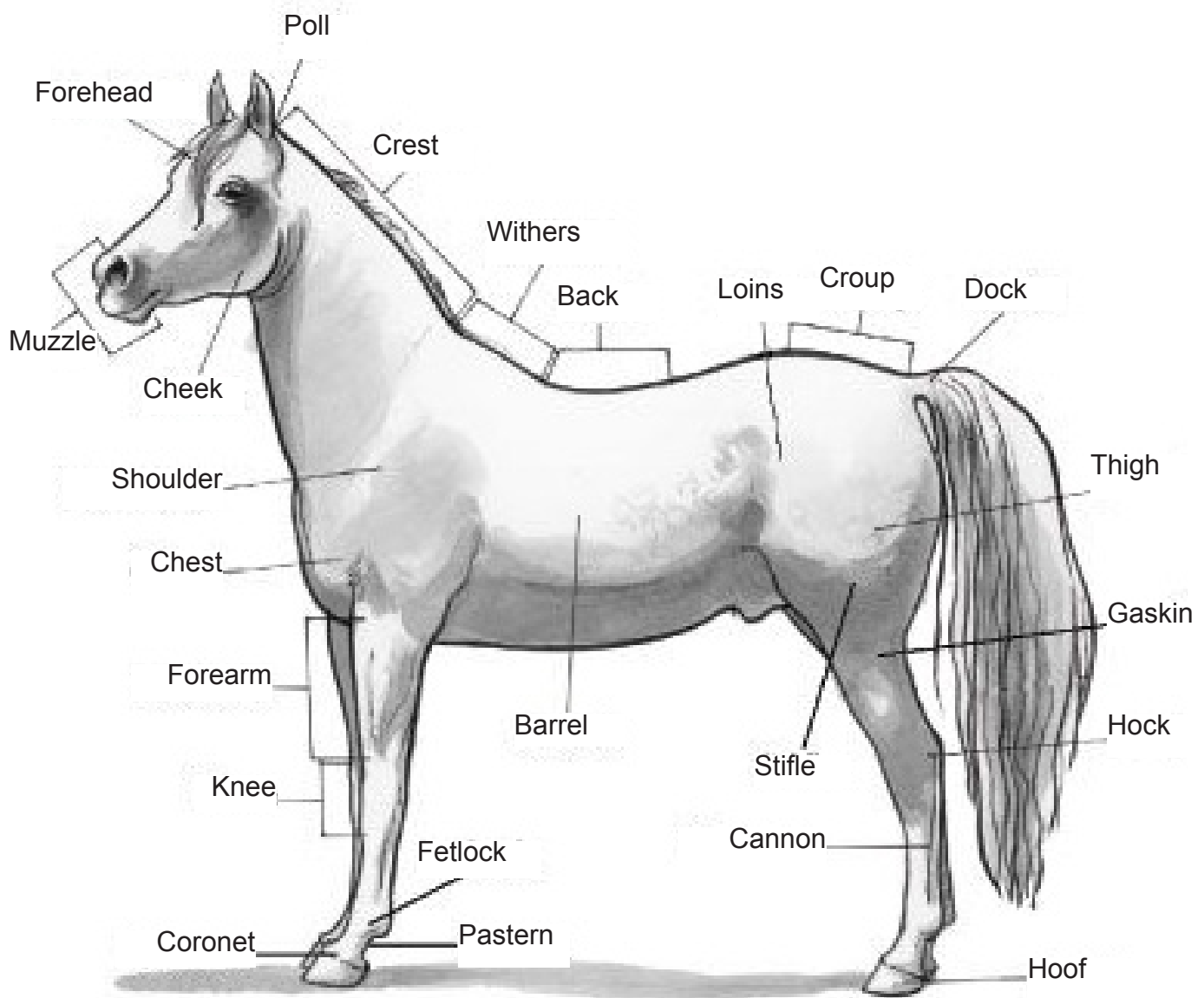
WE MEET the second Tuesday of each month at 7:30 at the Montana Fish, Wildlife and Parks building
490 N. Meridian Rd, Kalispell

FOR MORE INFORMATION contact:

President Ed Langlois

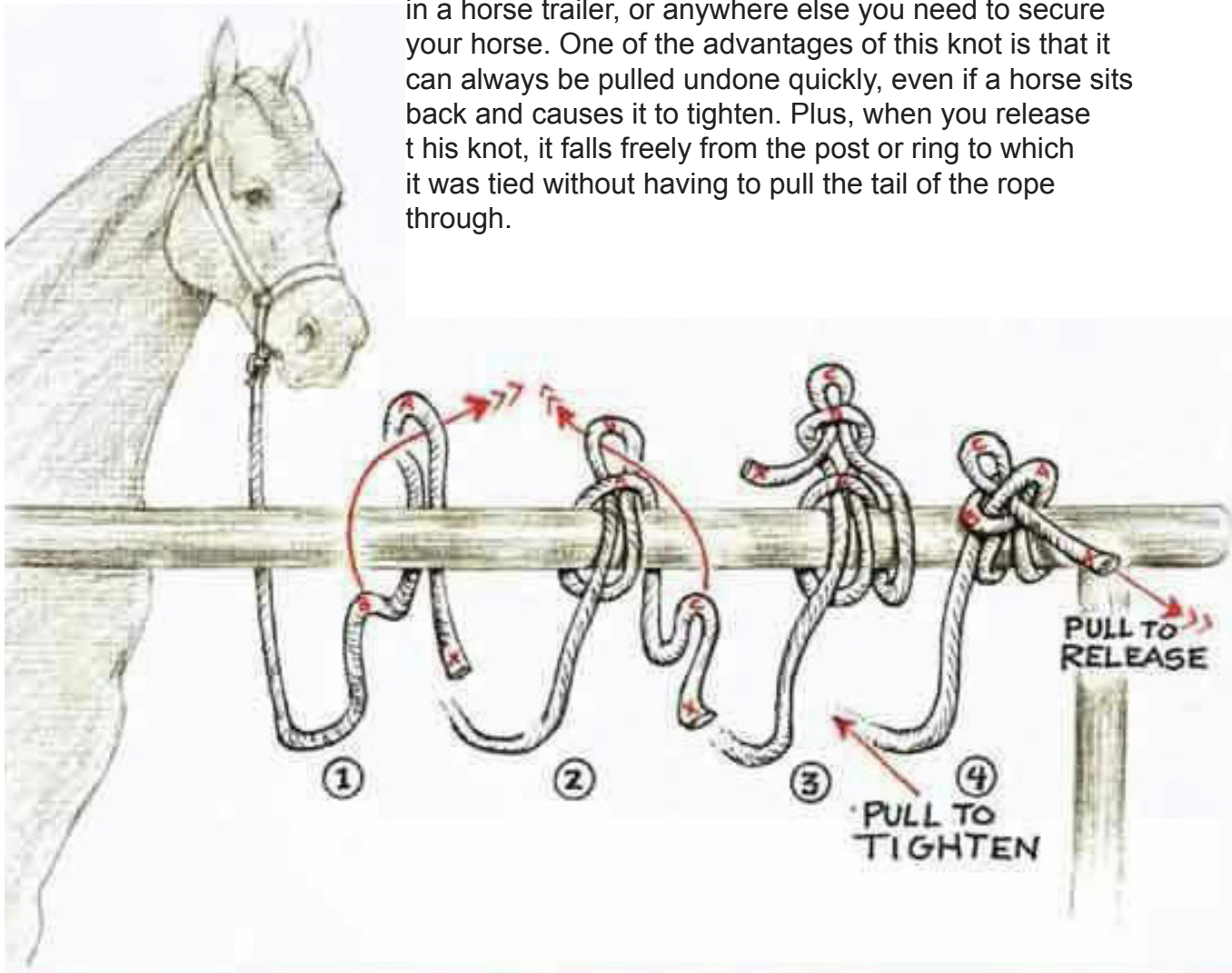
406.885.3560

langlois@aboutmontana.net

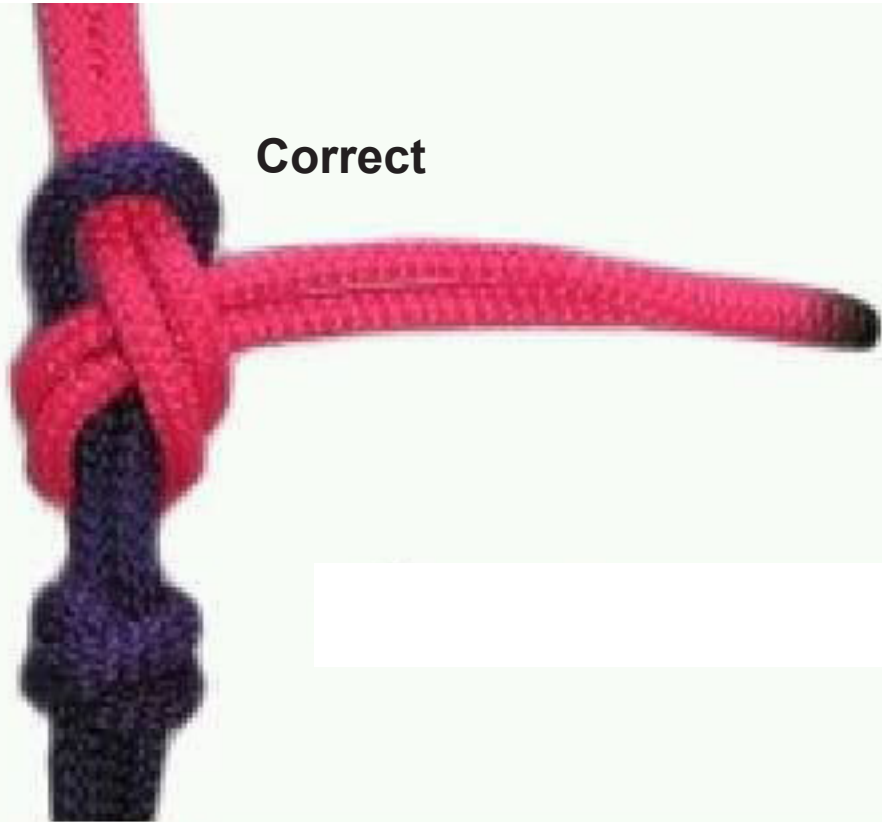


Farrier's or Robber's Knot

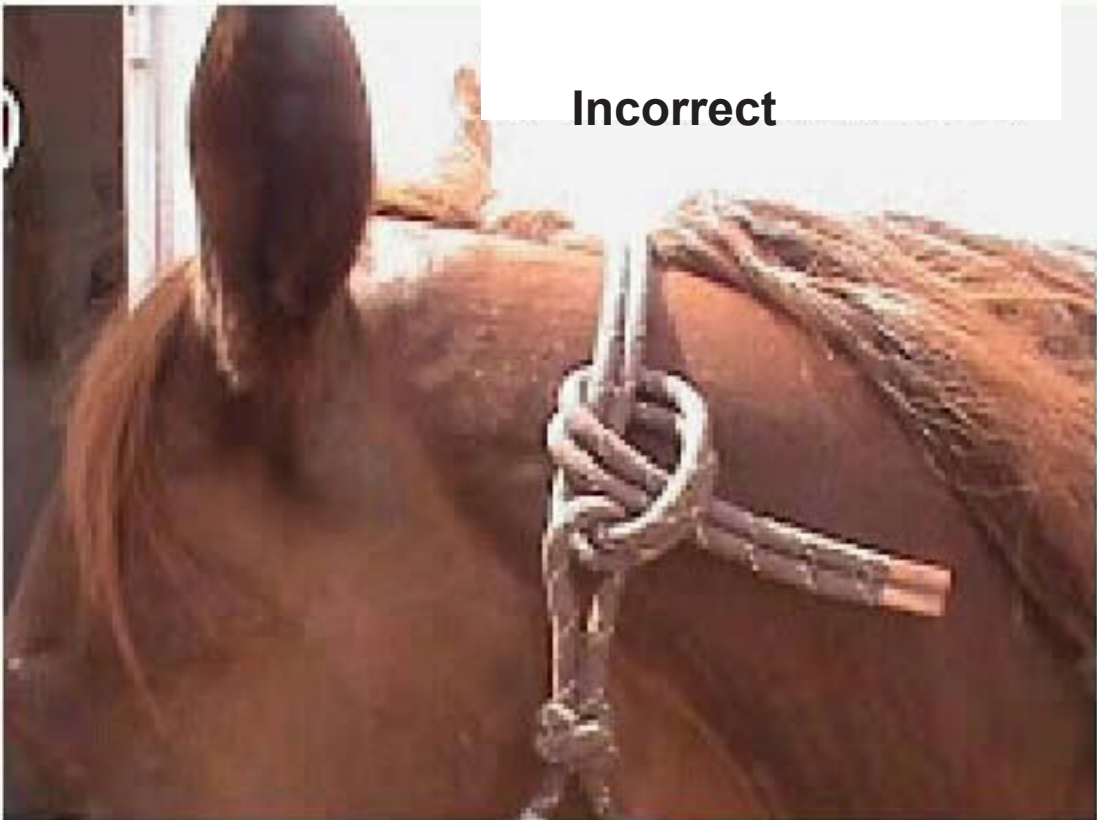
Once used by bank robbers and horse thieves, this quick-release knot is simple to use on a hitching post, in a horse trailer, or anywhere else you need to secure your horse. One of the advantages of this knot is that it can always be pulled undone quickly, even if a horse sits back and causes it to tighten. Plus, when you release this knot, it falls freely from the post or ring to which it was tied without having to pull the tail of the rope through.



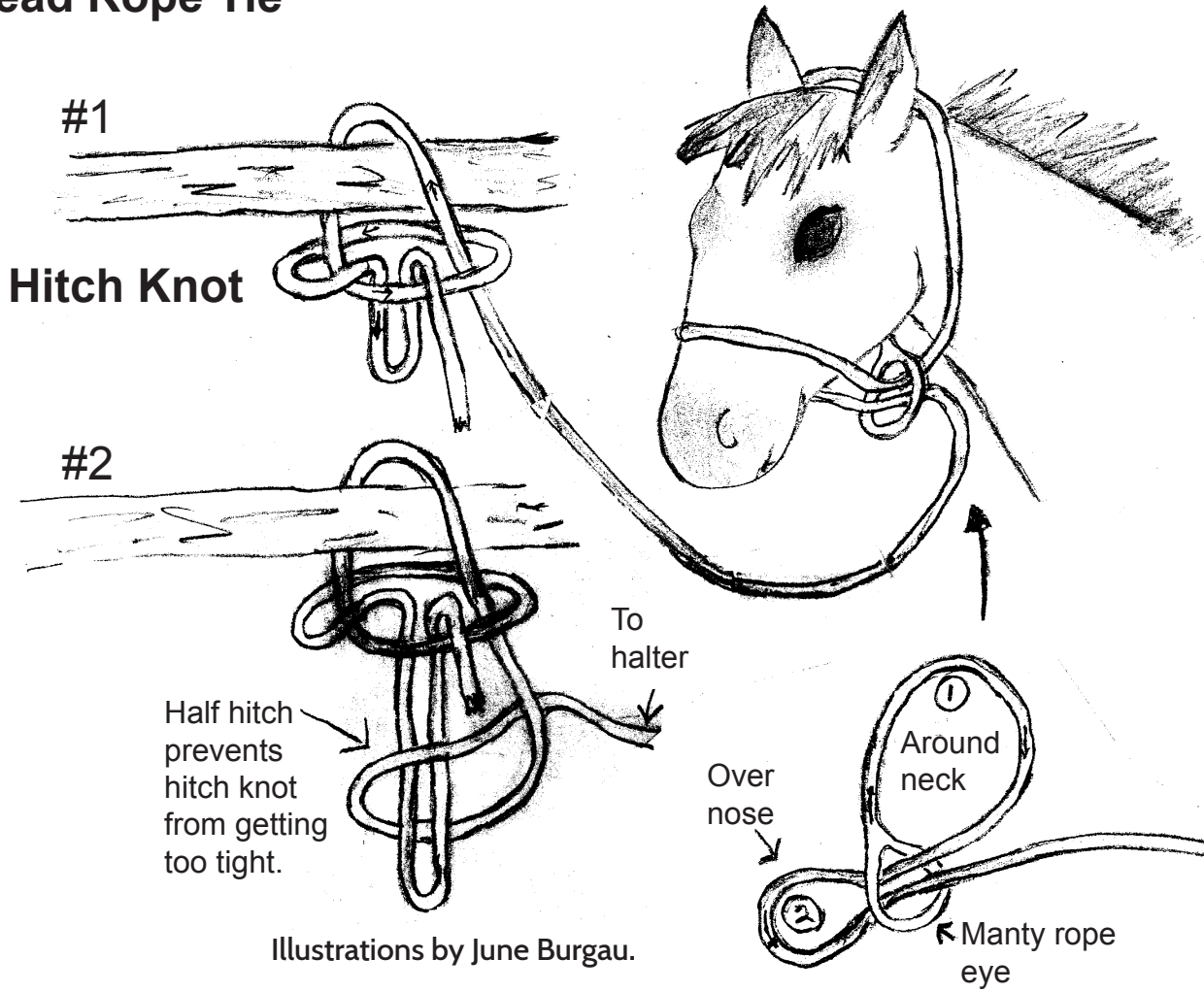
Correct



Incorrect



Lead Rope Tie



Illustrations by June Burgau.

Quick release manty rope halter



Highline



Where Should I Put My Highline?

By Deborah Schatz and June Burgau

Leave-No-Trace principles teach us to choose a site with a durable surface. What is durable?

We have been fortunate to be able to return to several sites we've used and see how they look the following summer. This is what we observed.

Dry, gravelly soil is by far the best durable surface. There is little vegetation for the horses to trample, and with a good cleanup of manure and a rake over the gravel, no one will know you were there. Dry grass is also a good surface. The next spring the grass will grow back very well. Beargrass is very durable. It is so tough that it's hard for the horses' hooves to hurt it and it protects the soil underneath. It will grow back the next spring. Brushy areas are also durable and will recover quickly.

Softer, moister areas take more time to recover. The following year the vegetation is not as dense as surrounding areas, but will recover.

To rehabilitate your highline area, clean up and scatter manure. This is so important because manure piles can remain for a year or more and will kill vegetation underneath. Carry a small rake to smooth out the area. Forest duff can be raked aside and scattered back on the area before leaving. Use rocks and downed branches to disguise the area and discourage others from using it.

In a popular camping area, if barren core (devoid of plants) is already evident, use it. In a more pristine site, avoid using an area where impact is just beginning.

Spend some time looking for that perfect camping spot. Get off the beaten path by following game trails, or go up or down the creek a ways. Locate your highline where it is invisible to other trail users.

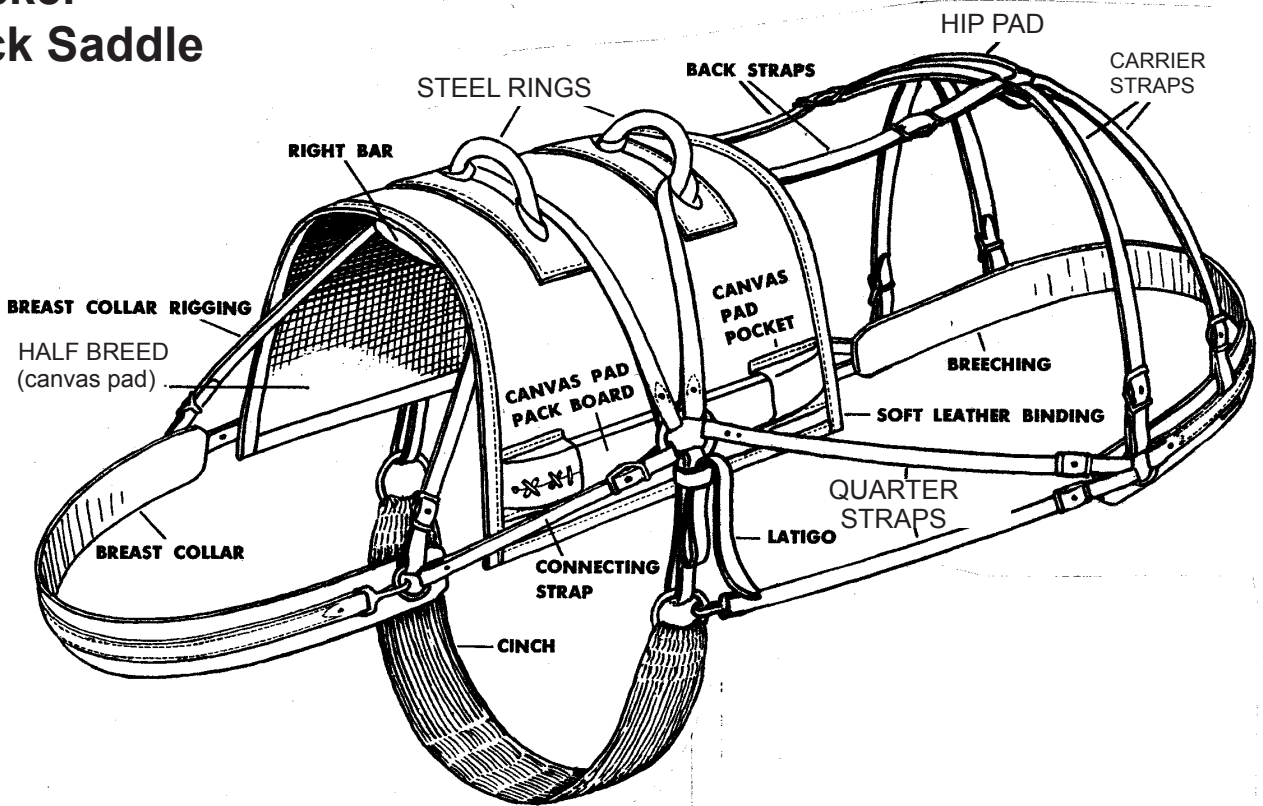
More highline tips from June Burgau, Leave-No-Trace Trainer: If possible, choose a foliage free area. It needs to be at least 200 feet from any possible water source.

The trees used to construct the line need to be at least 8" in diameter. Use tree saver straps a minimum 2" wide to prevent destroying the bark. The line needs to be high enough to clear the saddle horn on a tall horse. The horse tied nearest to the tree should be at least 8" away to protect the root system. It also needs a fixed swivel for each horse. Horses should be tied out of kicking range of each other.

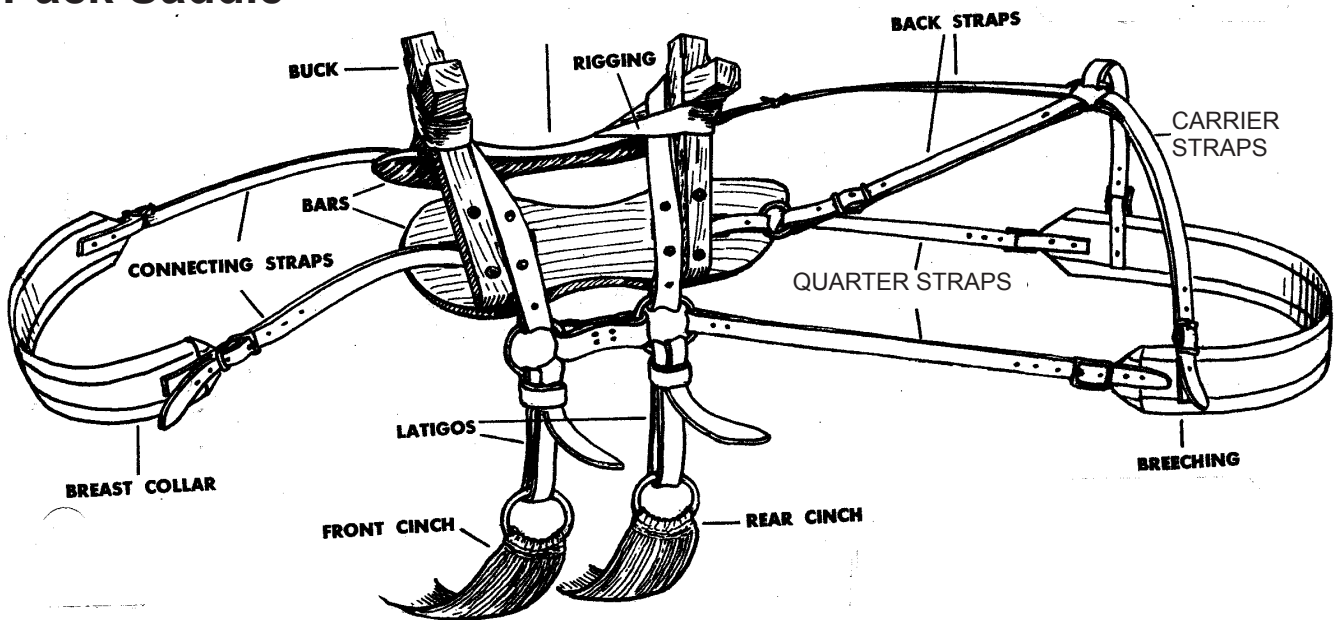
When the highline is taken down, restore the area, fill any holes pawed by the horses. Scatter the meadow muffins to prevent air tight caps that kill plants. If the native grasses have seeds, some can be gathered to reseed exposed ground. Cover this with duff.

Take pride in low- impact practices. Set a good example by doing the right thing.

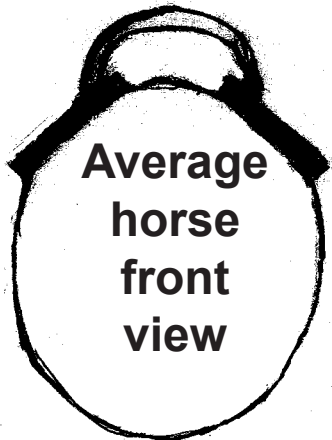
Decker Pack Saddle



Sawbuck Pack Saddle

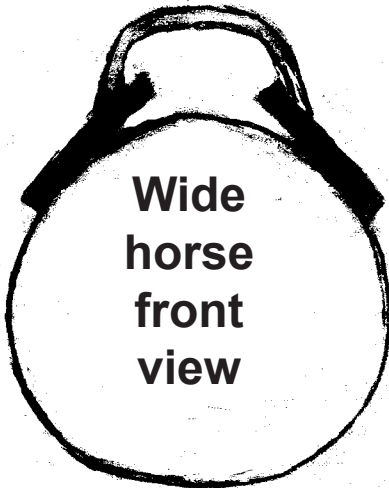


Front View of Pack Saddle Bars



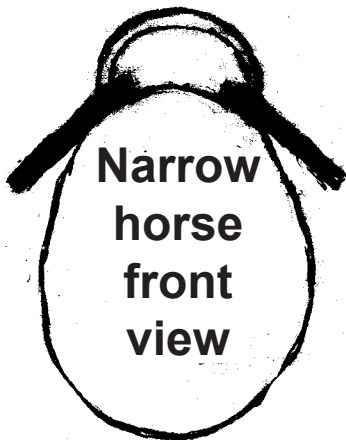
**Average
horse
front
view**

**Correct fit.
Bars have full contact.**



**Wide
horse
front
view**

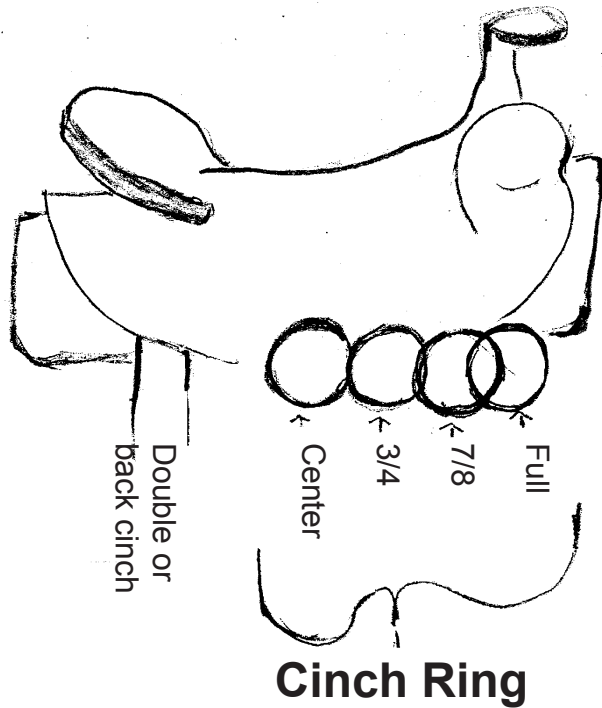
**Incorrect fit.
Bars contact only on
the bottom**



**Narrow
horse
front
view**

**Incorrect fit.
Bars contact only on the top.**

Saddle Rigging



Cinch Ring

Illustrations by June Burgau.

Saddle Measurement

Bars

The way the bars set on a horse's back, high or low, is controlled by the width of the gullet. There are generally only four different gullet widths used to fit the withers and backs of various horses.

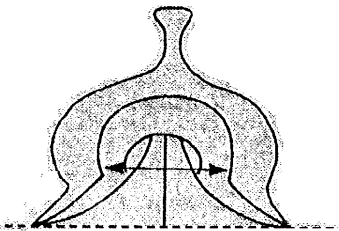
Regular Bars: 5 3/4"

Semi-quarter Horse Bars: 6 1/4"

Quarter Horse Bars: 6 1/2"

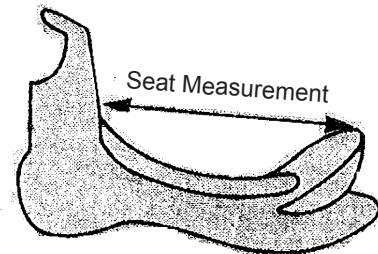
Extra-wide Quarter Horse Bars: 6 3/4"

Most horses today fall in the range of 900 to 1,200 pounds and the semi-quarter horse bars fits them quite well.



Gullet Height and Width

Measure the gullet straight across from the point where the bars join the fork. The height is measured when the tree bars are resting on a flat surface. As a general rule, you should have two fingers between the gullet and your horse.

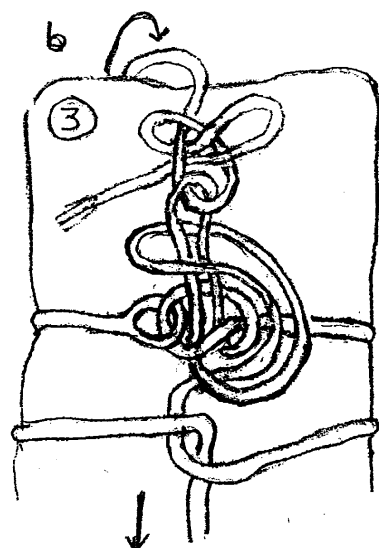
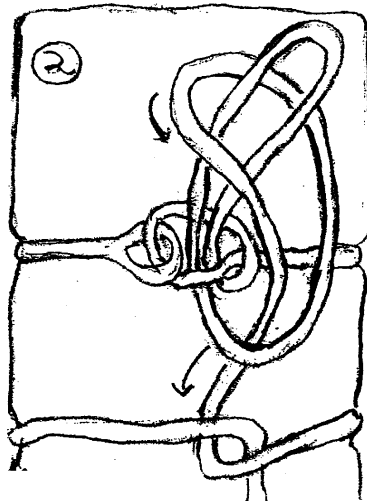
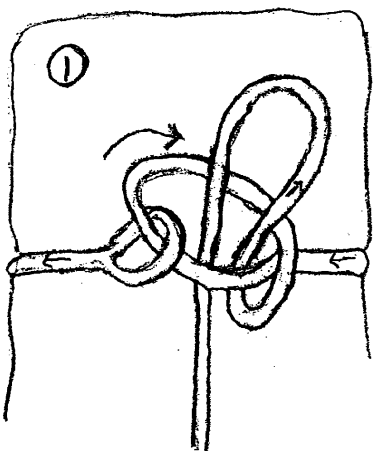


How to Measure the Seat of a Western Saddle

When measuring the seat of a Western Saddle, measure from the top of the swell to the front edge of the cantle. (See above.)

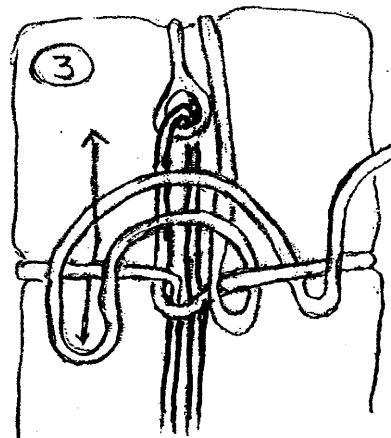
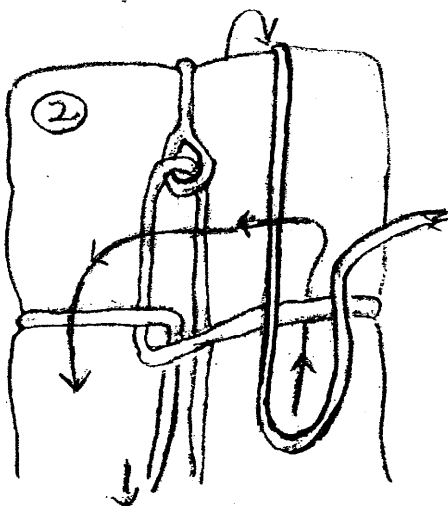
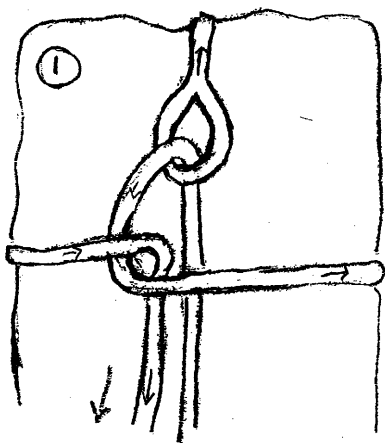
Illustrator unknown.

Loose Duffel Hitch

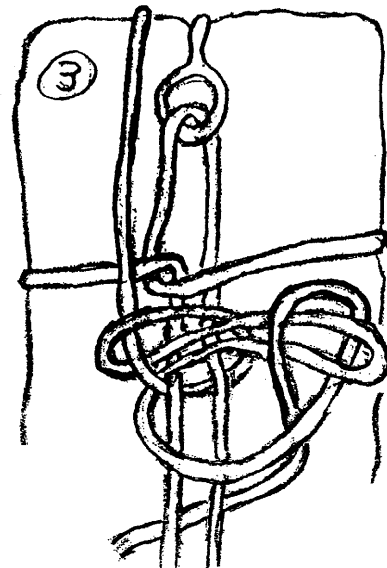
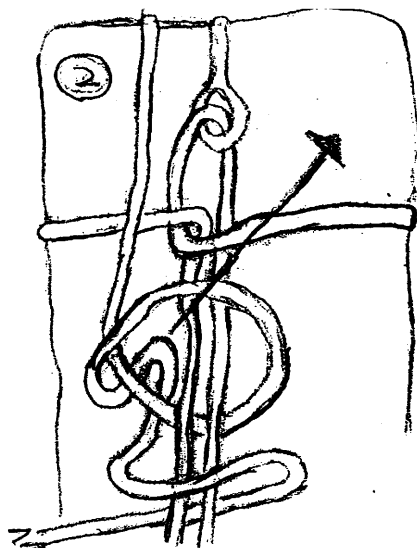
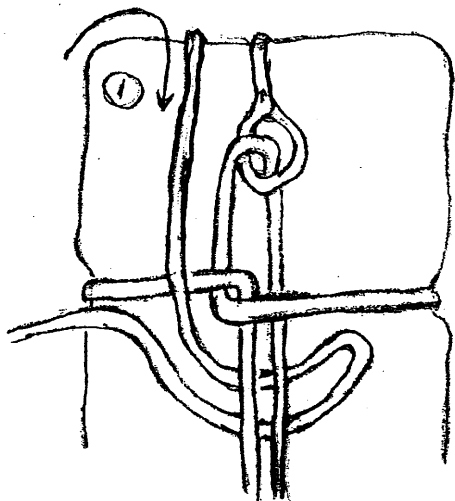


Top tie

Sliding Clove Hitch



Quick Release Hitch

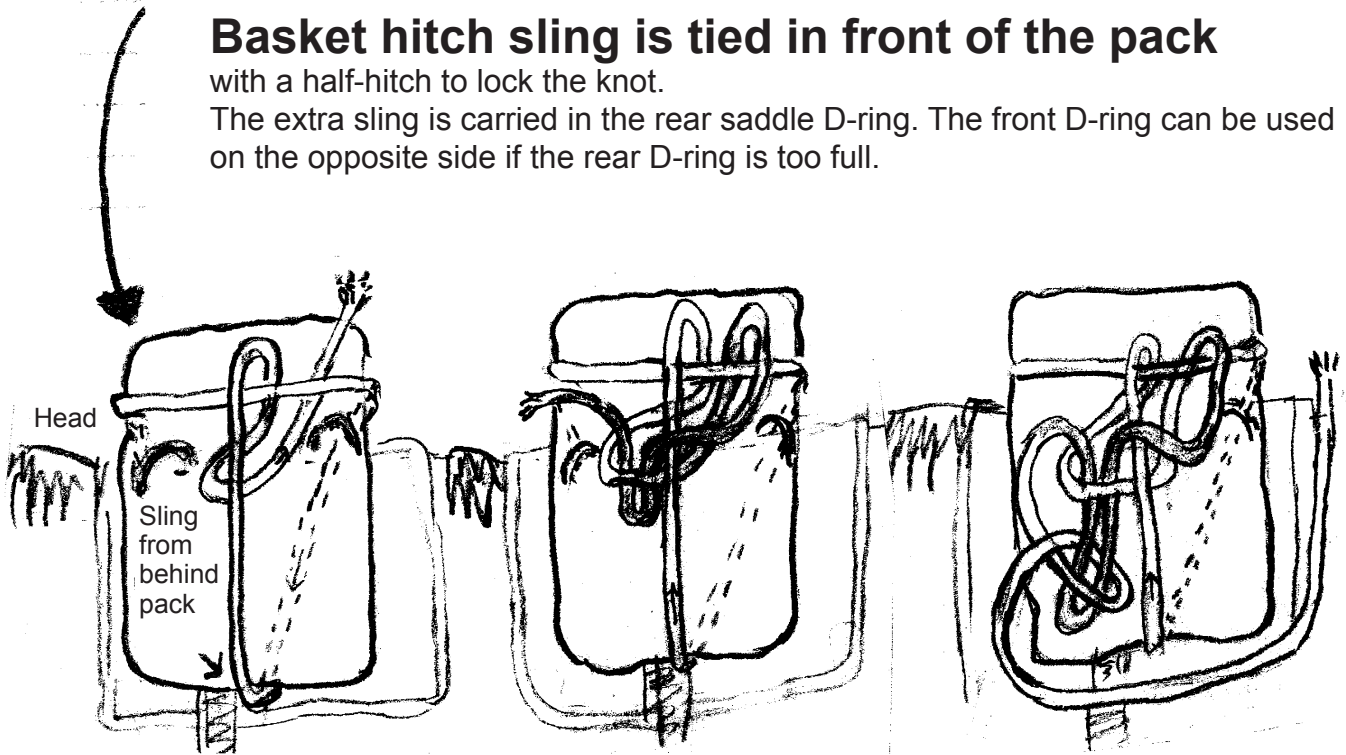


Illustrations by June Burgau.

Basket hitch sling is tied in front of the pack

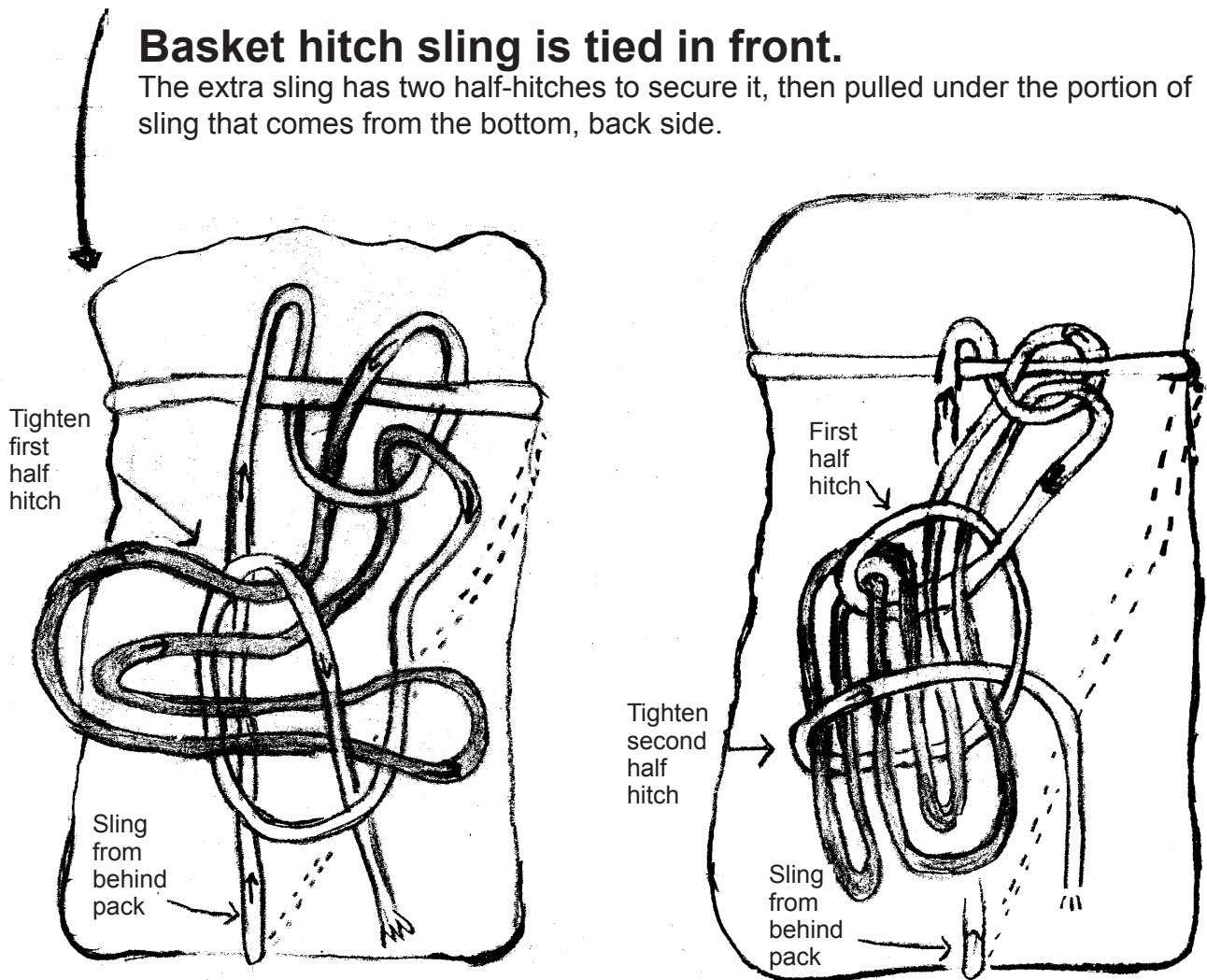
with a half-hitch to lock the knot.

The extra sling is carried in the rear saddle D-ring. The front D-ring can be used on the opposite side if the rear D-ring is too full.

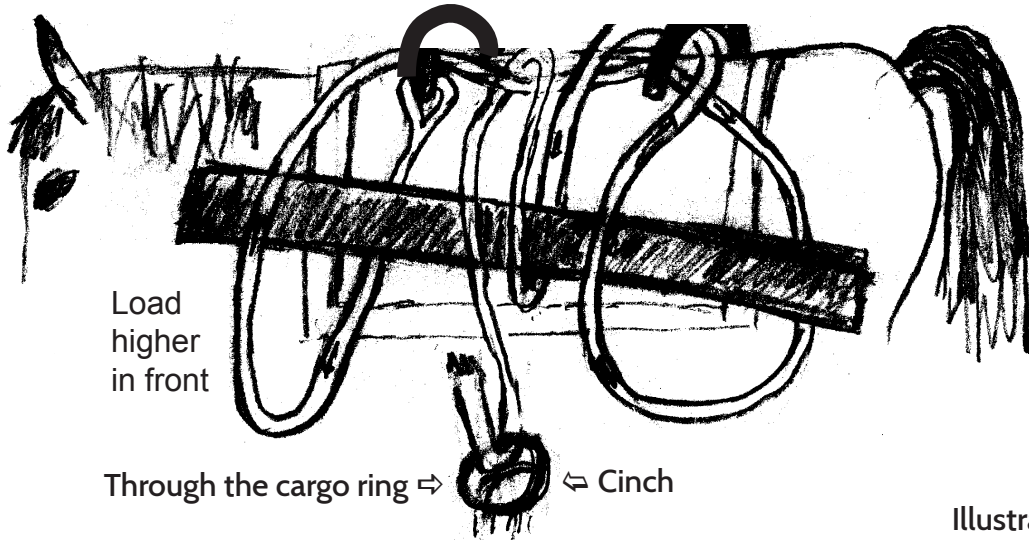


Basket hitch sling is tied in front.

The extra sling has two half-hitches to secure it, then pulled under the portion of sling that comes from the bottom, back side.



Barrel Hitch Sling



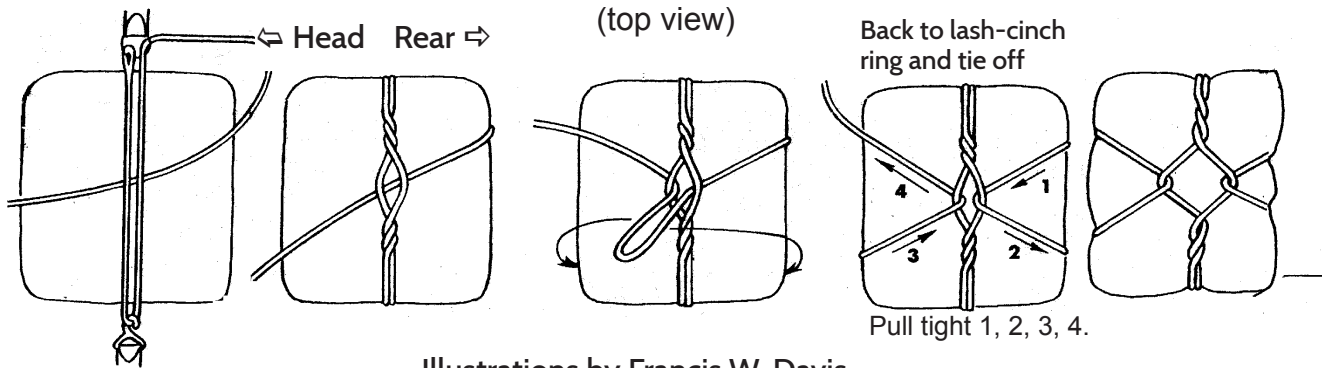
Load higher in front

Through the cargo ring ⇨ ⇨ Cinch

Tie off at rope between D rings

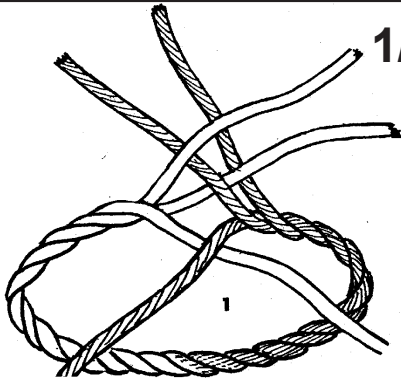
Illustration by June Burgau.

One-Man Diamond Hitch



Illustrations by Francis W. Davis

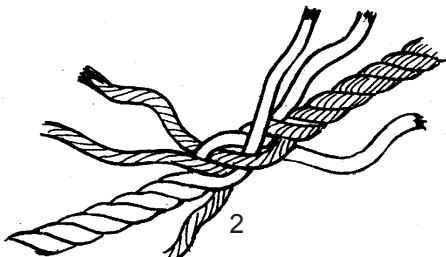
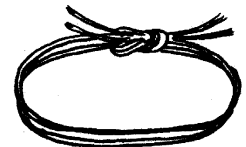
1/4" manila weak link



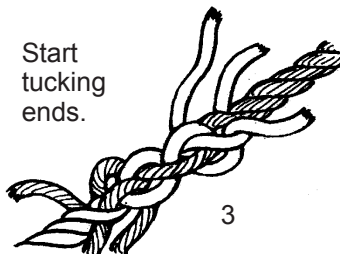
To make a manila weak link, use about 14" of 1/4" rope. Unwind enough of the strands to make two or three tucks with each end. Make a short splice as shown.

A weak link is used so that if a horse should fall, the link will break before he can pull others down with him. Many available items can be used for a weak link from:

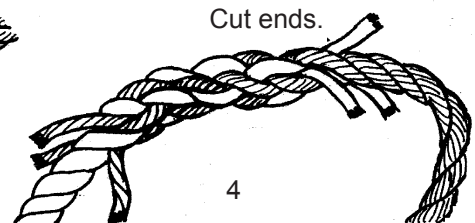
A SPLIT STEEL RING TO BINDER TWINE.



Pull ends together.

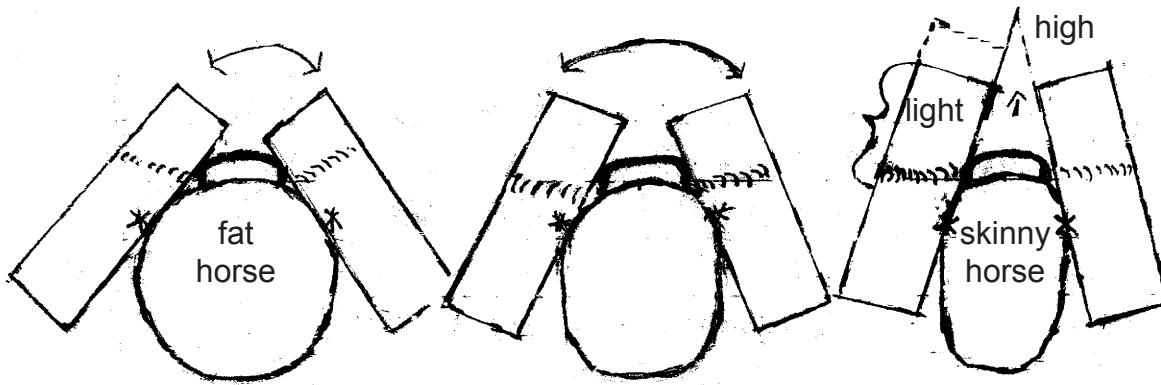


Cut ends.



Illustrations by Francis W. Davis

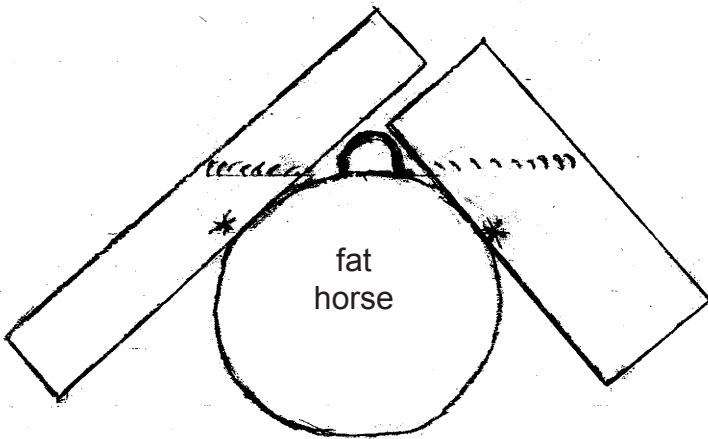
Shapes and Balance



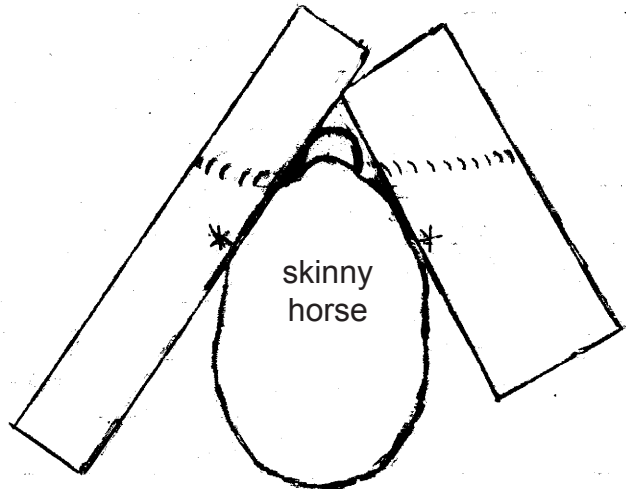
Wide D good on round wide horses

Good packs

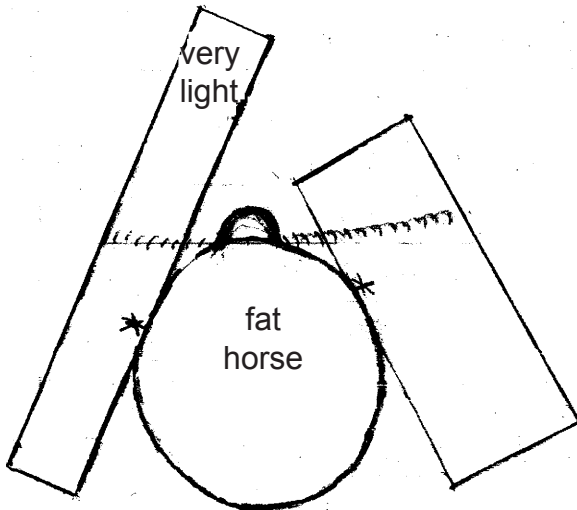
Tall pack with very light top



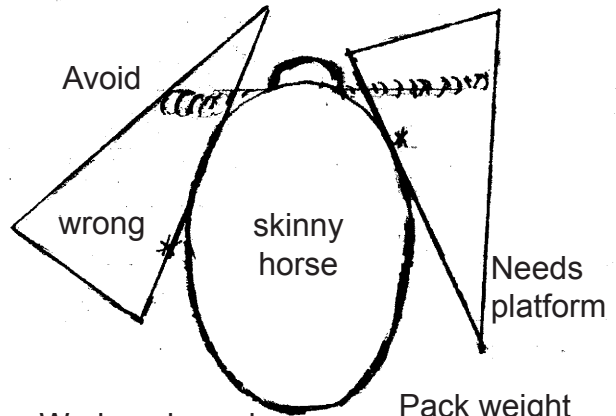
Load too wide on the bottom



"A" shape is ideal.



Narrow D allows more pack adjustment on any size or shape horse or load.



Wedge-shaped pack will slip through sling. Load will be lost.

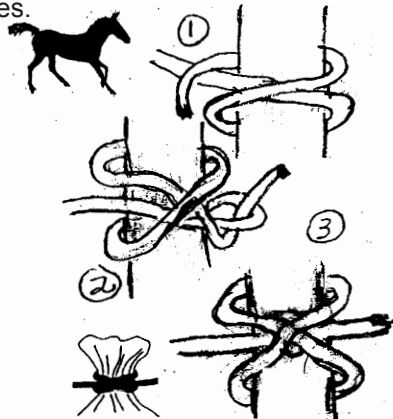
Pack weight will tighten sling.

- Riding saddles
- Saddle blankets
- Cinches
- Breast collars
- Bitching / crupper
- Bridles
- Saddle bags
- Pommel bags
- Saddle covers
- First aid kit
- Pack saddles
- Saddle pads
- Cinches
- Manties / ropes
- Panniers / top pack
- Nose bags
- Piggin' strings
- Hay
- Hay nets
- Oats / pellets
- Nose bags
- Water
- Collapsible water bucket
- Brush box
- Hobbles
- High line / swivels / tree savers
- Easy boot
- Shoeing tools / nails / hoof pick / hammer
- Wipe / spray bottle
- Extra lead rope / halter / latigo
- Rake
- Shovel
- Axe
- Saw
- Heavy coats
- Dusters / rain chaps
- Rubber boots
- Extra shoes
- Hats
- Clothes
- Dirty clothes bag
- Soap
- Toothbrush, paste
- Washcloth, towel
- Lotion, chapstick, sunscreen
- Allergy pills, pain pills, tylenol
- Bug spray
- Headlamps / extra batteries
- Extra TP
- Bear spray
- Camera
- Pencil / paper
- Compass
- Map
- Binoculars
- Sunglasses
- TP / little shovel
- Bandana
- Sleeping bags
- Pillows
- Tent / poles / ground cloth
- Rug
- Chairs
- Table
- Dining fly
- Cot and thermarest / thermarest
- Bear bag and ropes
- Stove
- Propane bottles
- Dishes bag
- Plates, bowls
- Cups
- Kettles, fry pan
- Forks, spoons, knives
- Flipper
- Spatula
- Big spoon
- Can opener
- Measuring cup
- Widemouth water bottle
- Dish soap, cloth, towel
- Laundry soap
- Matches / lighter
- Paper towels
- Garbage bags
- Food
- Water bottles
- Collapsible water bucket
- Water filter
- Lunchbox
- Books / cards
- Fly rod / files / license
- Flower books

Knots

Constrictor Knot

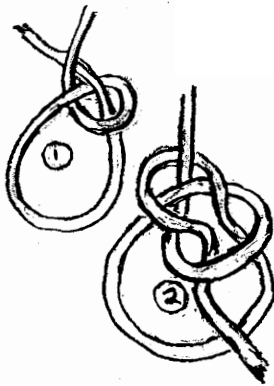
Uses: Tie up sack, duffel or kit ropes.



Use thin, soft line on hard material, hard line on soft.

Bowline

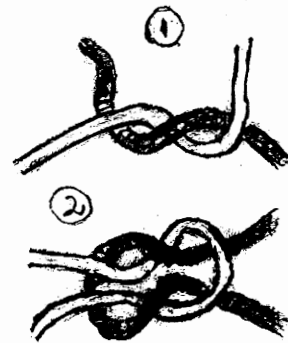
Uses: Tie up stock, hoisting, loop.



Keep working end inside loop. Easy to make and untie, does not jam. Use on ring or rail.

Square Knot

Uses: Temporarily join two



Quick, easy, unties if one end pulled back. If mis-tied, Granny Knot results.

Lineman's Hitch

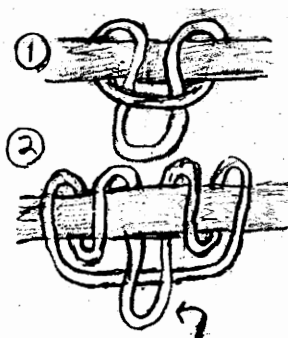
Uses: Loop in line to hang camp gear or pulley.



Makes a good knot for camp use and stock picket line. Can tie with-out end of rope, quick, strong, easy to tie. Holds its shape as load is down at right angle.

Prussic Knot

Use: A movable tie on a tight highline



Movable after load is released. Extra coils add safety. Jams solid, but can slip on wet rope. Attach a swivel and a 3" ring to the loop to prevent the lead rope from twisting.

Clove Hitch

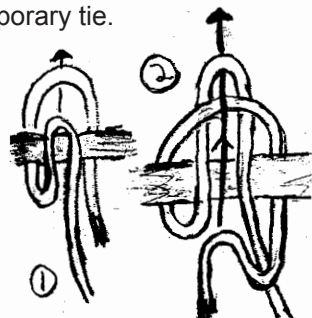
Uses: Secure guy lines



Turn wrist until knuckles face each other. A stopper know adds security. Less reliable on square post. Also called Peg Knot. Tie to post.

Highwayman's Hitch

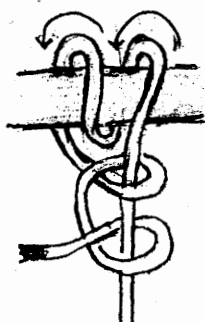
Uses: Hold livestock, temporary tie.



Legend calls it Robber's Knot for get-away on horse back. Easy to tie, one pull to untie and release hard to reach rope.

Round Turn & Two Half Hitches

Uses: Secure stock.



Two half hitches hold round turn in place. All purpose knot. Reliable, easy, does not jam, resembles Fisherman's Bend.

Sheet Bend

Uses: Join similar size ropes and line to leader, hang a flag.



Can be slipped. Double Sheet Bend adds security. Holds under high load, stronger than Square Knot. Loose ends should come out same side for security.

Illustrations by June Burgau.

Appendix

Common Horse Terms

Stallion: a mature male horse that can reproduce.

Mare: a mature female horse over 4 years old.

Foal: a young horse of either gender that is still with its mother.

Filly: a young female horse under 4 years old.

Colt: a young male horse under 4 years old.

Yearling: a horse that is officially 1 year old.

Gelding: a male horse that has been castrated.

Pony: a mature horse of either gender that will never grow taller than 14.2 hands.

Hands: the unit of measurement used to determine the height of a horse. A hand is 4 inches tall.

Mule: a cross between a horse and a donkey.

Tack: the equipment used when working with horses; halter, saddle, bridle, etc.

Green Horse: an untrained or inexperienced horse.

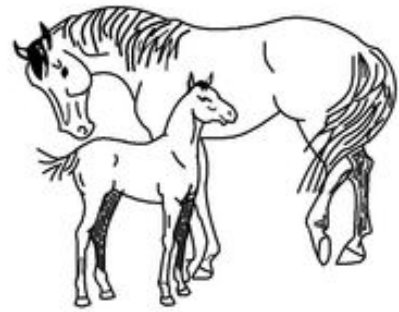
Withers: the slight ridge in the horse's backbone, just behind the mane. A horse's height is measured from the tallest point of its withers.

Farrier: also called a horseshoer, this is a skilled craftsman who trims and shoes horses' hooves

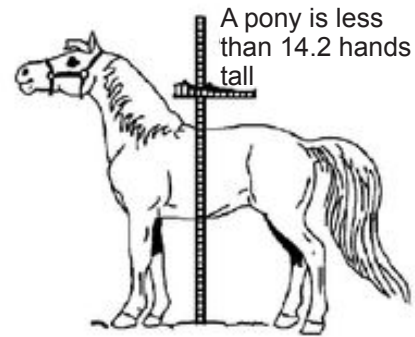
Broomtail: a horse of the American West that is small and of poor quality.

Joe Poke: a stob pointing towards you on the trail which gets stuck in your stirrup.

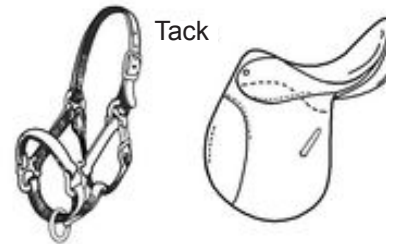
Mare and foal



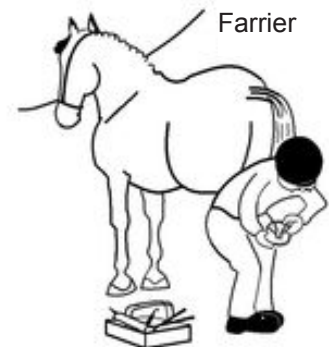
A pony is less than 14.2 hands tall



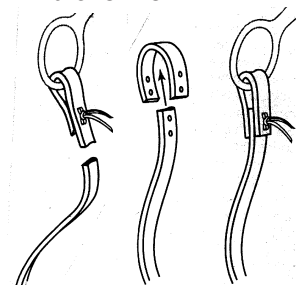
Tack



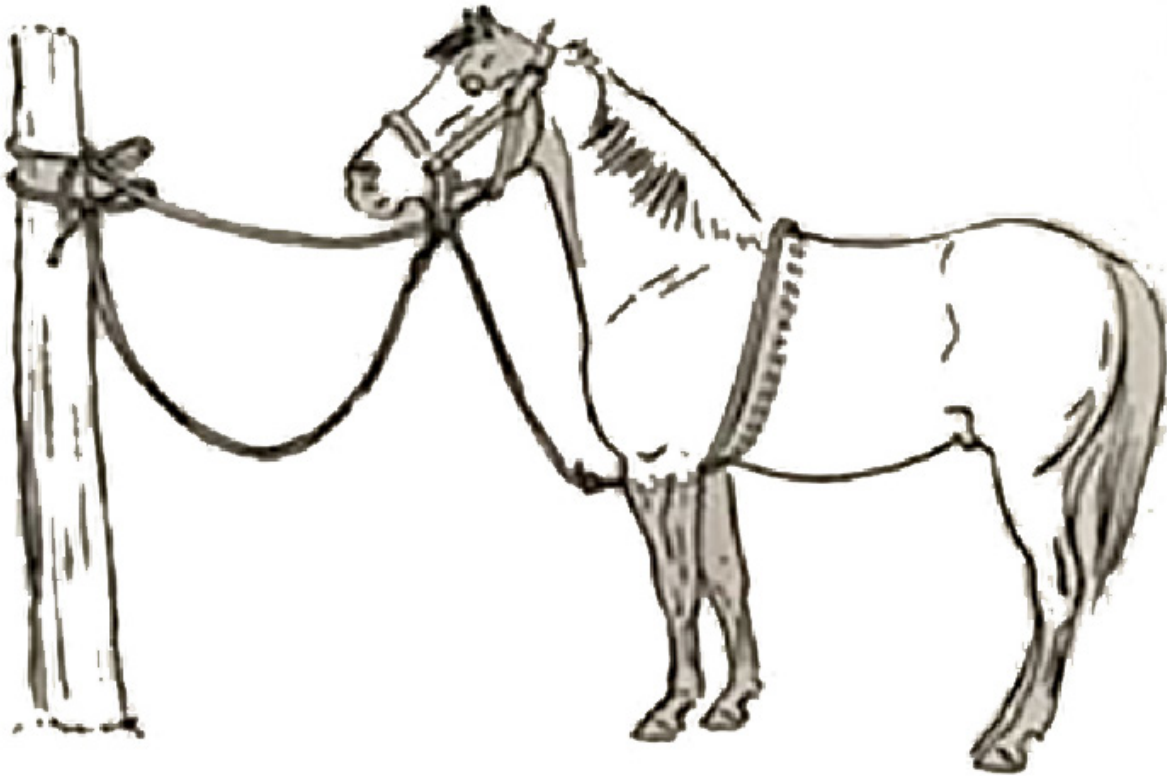
Farrier



How to repair a broken rein



Pulling Harness



Sayings

If it's not working for you, quit doing it.

*You can quit,
You have every reason to quit,
Quitting is the easiest thing you'll ever do,
Don't quit!*

Russ Garvin, charter member of the Back Country Horsemen of the Flathead

Never panic and don't show fear.

When I die, let it be said that I was never hard on a horse.

Spike Van Cleve

Trailer backing made easy

By Greg Schatz

A lot of people ask me how to back a trailer so I've tried to write it down as simply as I can. This works whether you are using your mirrors, looking out your window or looking over your shoulder. The first thing to remember is that you are backing the trailer not the truck. When you are backing your trailer concentrate on turning the trailer tires, not the whole trailer. So you're sitting in the driver's seat of your truck, you want the tires on the trailer to turn to the left, hold on to the bottom of the steering wheel with one hand and turn your hand to the left. The trailer will go to the left. You want the trailer to turn right, with your one hand still on the bottom of the steering wheel, turn your hand to the right. Once you have your hand on the bottom of the steering wheel leave it there. If the trailer isn't going where you want it to, look where your hand is, it has been moved to a different part of the steering wheel. The smallest movement of your hand on the bottom of the steering wheel will turn the trailer. This works with any trailer. The farther the trailer axle is from the steering wheel, the bigger the turn the trailer will make. A short trailer will turn faster, a long trailer will turn slower. If the trailer isn't going where you want it to, look where your hand is, it has been moved to a different part of the steering wheel.

When you're ready to start to practice your backing, look for a big empty parking lot, FVCC's parking lots are empty on the weekend. Obviously you need to watch so you don't hit a tree with the truck or trailer. I turn the radio down and open the windows when I back. With the windows down you get less glare on the dirty mirrors and you can hear if you start rubbing the trailer up against something. Another thing I do is if I'm backing towards a tree that is four feet away, I get out of the truck and I scrape a line in the dirt with my boot three feet behind my mirror. When I have backed up enough that my mirror gets to the boot scrape, I get out and look how close I am to the tree.

Check and make sure your truck is rated to pull your loaded trailer. I see a lot of rigs going down the road that the trailer is way too big for the truck and this leads to accidents and hurt horses. Check that all of your tires are properly inflated. Your trailer break away brake and safety chains should be set up so that your trailer brake cable comes loose and engages your brakes, then your safety chains should engage. If you have a gooseneck trailer your safety chains should engage before the trailer reaches your tailgate.

Truck and trailer worksheet:

Towing capacity of your truck: bumper pull and goose neck _____

Weight of your truck _____

Weight of your empty trailer _____

Weight of your loaded trailer _____

Combined weight of your truck and trailer _____

Tongue weight of trailer on truck _____

Will Your Horses Go Hungry Tonight?

By Allen Rowley, Forest Supervisor, Fishlake National Forest, Utah

What follows is a three-part series concerning the grazing of pack and saddle stock in the Wilderness. This series moves beyond the use of pickets, hobbles, and highlines. Instead, it focuses on the availability of forage, range condition, and utilization of the existing forage. The specific examples used here are from the Bob Marshall Wilderness Complex, but the principles apply throughout the west. This is a different twist to looking at Wilderness grazing, but a very important one.

Part 1

After all day on the trail, have you ever pulled into a likely campsite and asked yourself if your horses will go hungry tonight? Most of you do answer this question, since abundant forage is a critical part of a good camp. Through experience, some people can make this determination with a quick glance around. But how do you know for sure if there will be enough feed for your horses? What impact will your grazing have on this campsite? Over the next three issues, we will talk about avoiding hungry horses, and end with two tools you can use to answer the question for yourself.

This question is really best answered in three separate steps to be covered in this three-part series:

- First, how much forage does your stock eat?
- What is the condition, or health of the site where I want to graze my stock? This provides the answer to how much forage the site will produce.
- How much of the forage that is present should be consumed?

How much forage does your stock need to eat?

This is the easy question. Animal science researchers have measured the daily feed intake requirements of horses and mules for years. These frequently cited figures range from 22-30 pounds, dry weight, of daily feed intake, depending on animal size. The most commonly used figure is 26 pounds, dry weight, for a 1,000 pound horse each day. Poor quality or high quality makes little difference, a horse will still consume about 26 pounds dry weight of feed a day. Healthy, idle horses can maintain themselves on 26 pounds of good grass hay, or the equivalent in fresh grass per day. A horse being worked hard will also eat approximately 26 pounds of feed a day; but to stay in shape a larger percentage of this will need to be high protein supplements like pellets. To take in the required amount of forage, horses need 5-12 hours of free grazing. In a lush irrigated pasture some horses may only need 4 hours to graze the needed 26 pounds of forage. However, in drier or poor range conditions, a horse will need the full 5 to 12 hours of grazing to meet their forage requirements. On the average, 6 hours is what Wilderness travelers should plan for grazing their animals. Less time than this and there is the chance the horses will not find enough forage. The need for 6 hours of grazing is good news for most of us since on a Wilderness pack trip your horses and mules will seldom have 12 hours free for grazing. More likely, between time on the trail and on the high line at night so they don't run off, there are only 3-6 hours available for grazing.

If you do not have 6 hours to allow free grazing, then SUPPLEMENTAL feed should be supplied. In planning how much extra forage may be required consider the following table.

<u>Hours of Grazing</u>	<u>Additional Feed Needed</u>
0 hours	26 pounds
1 hour	21.5 pounds
2 hours	17.5 pounds
3 hours	13 pounds
4 hours	9 pounds
5 hours	4.5 pounds
6 hours	0 pounds

Based on this guide, if you can only allow 3 hours of free grazing a day you should plan on packing in 13 pounds of feed per animal per day.

So the answer to how much feed your horses need is: each 1,000 pound horse or mule will need, on the average, 26 pounds dry weight of feed per day. Under free grazing, it will take your horse from 5-12 hours a day to gather this much forage. On the average, you should plan to allow your stock to graze 6 hours daily or plan on packing in supplemental forage.

This leads us to the next question; how much forage is available at a campsite? We will start to answer this next time.

Part 2

In the last article we discussed how much forage a horse needs each day, perhaps this was review for a lot of you. This article may be new and different as it amounts to several hours of college courses in range management, and/or years of practical experience boiled down to a page or two on range condition and what it means.

What is the range condition, or health, of your grazing area?

Determining range condition can be complicated, but it is a critical tool for management because range condition has a strong control over how much forage a site may produce.

Range condition or health is measured by comparing the ideal amount of naturally occurring vegetation against what is actually on the site. Sites with the greatest amount of the ideal vegetation are in the best condition, rated as excellent. The ideal naturally occurring vegetation is determined by the soils, elevation, precipitation amounts and a number of other variables. These same factors also influence the productivity of the site.

Comparing the existing vegetation with the ideal vegetation has a real practical value for range management. On bunchgrass ranges the naturally occurring vegetation is the very vegetation that horse, mules, and wildlife desire, seek out and graze first. This is also the grass species that provides the most nutrition for grazing animals. Therefore managing for good to excellent range condition is advantageous as it provides the most productive and nutritional forage.

In the Bob Marshall and surrounding Wilderness areas, there are three premier grass species sought out by all grazing animals; Idaho fescue, bluebunch wheatgrass, and rough fescue. These

three grass species rank highest in productivity, palatability, and nutritional value for both pack stock and wildlife species.

The downside to these grasses is they are known as decreasers. Meaning they are so desirable that they are sought out and grazed again and again, until if unchecked, they may be reduced in numbers. Continual season-long grazing with no chance for the grass plants to regrow and build up an energy store in the roots will kill the plants over time. In our part of the country the regrowth happens typically in May through July when the soils are moist. At least one out of every three years, grass plants should not be grazed during this regrowth period. The various rest rotation and deferred rotation grazing systems are based on this principle of providing some rest, thus allowing regrowth during the summer.

In a Wilderness setting, you can see how a problem could develop. A party with horses and mules arrives at a campsite in mid June. There is plenty of grass so they free graze all of their stock and use very little supplemental feed. This group moves on the next day, but next week another party does the same thing. This continues all summer long, at this popular campsite week after week; the grass never gets the chance to completely regrow and build up an energy store. This is exactly the situation that is happening in the most popular areas of the Bob Marshall Wilderness Complex, for example the area from Meadow Creek to Salmon Forks on the South Fork of the Flathead.

The following table shows the correlation of range condition to the amount of forage available. This information is taken from range surveys done in 1993. There is variation from site to site, but the chart does paint a clear picture of some poor condition range sites in popular areas, and how low their production is compared to a site in good or excellent condition.

Location	Condition	Production (dry weight grass)
Danaher Meadows	Good-Excellent	1100 lbs/acre
Babcock Creek	Good	700 lbs/acre
Bartlett Meadow	Good	420 lbs/acre
Spring Creek in the Danaher Meadows	Fair	870 lbs/acre
Murphy Flats	Fair	400 lbs/acre
Hodag Flats	Fair	250 lbs/acre
Big Slide in Young's Creek	Poor-Fair	220 lbs/acre
South end of the old Black Bear	Poor-Fair	205 lbs/acre
Kelly Point (near Black Bear)	Poor	102 lbs/acre

As a rule of thumb, bunchgrass range sites in good to excellent condition produce 600 - 1,000 lbs. of grass per acre. The production on sites in poor or fair condition is dramatically below this level. The above chart is not a complete sample of all the areas in the Bob Marshall Wilderness Complex, but note the number of sites in poor to fair condition along the popular South Fork corridor.

Now that we have some understanding of range condition, what it is, and how important it is, what can we do with the information? Two options are available. One, when camping in popular corridors use SUPPLEMENTAL forage as much as possible. You will be doing your part to allow the grass the needed rest. The Spotted Bear Ranger District is so concerned about this that we are planning to feed 100% supplemental forage for all government animals at the Black Bear

Administrative site. One commercial outfitter is planning to feed 100% hay in the Black Bear vicinity. The second action for a Wilderness traveler to take would be to simply avoid areas in poor range condition and camp somewhere else.

In the next issue, we will wrap up with a tool to determine if there is enough grass to support your stock; and a method to determine how much the site has already been grazed.

Part 3

In part 1 we discussed that the average 1,000 pound horse needs 26 pounds (dry weight) of forage per day, and it will take a horse at least 6 hours of free grazing to eat this much. In part 2 range condition was discussed. Condition was then correlated to forage productivity. In this final article we will attempt to tie together the range condition and your livestock's needs while protecting the long-term health of the site. To help, we will close by discussing two tools you can use to answer for yourself if your horses will go hungry tonight.

How much forage should I let my horses eat?

Research has shown that range sites in good to excellent condition may withstand up to 40% of the current grass crop being removed by grazing. If more than this is consumed, range condition will likely deteriorate.

Grazing sites in poor to fair condition must receive less than 40% utilization to enable the range condition to improve. Poor or fair condition sites may still have a small population of Idaho fescue, bluebunch wheatgrass, or rough fescue. But these few plants will be the first ones grazed. Remember animals will seek out these plants due to their superior palatability and nutrition. The stock that graze the area will seek out the same plants and graze these desirable plants again and again. This continued grazing prevents these desirable plants from ever being healthy enough to produce the needed seed to reestablish on the site. Only by reestablishing these desirable species can range condition improve. To allow desirable plants to reseed, the site utilization levels on poor to fair condition sites must be even lower than 40%.

In the Bob Marshall and surrounding Wilderness areas, the Limits of Acceptable Change process set 40% as the maximum utilization level in the popular corridors. In these same areas the objective is to maintain range sites in at least a good condition. In the more pristine areas of the Wilderness 20% has been set as the maximum utilization level. The objective for more pristine areas is for the range condition to be excellent.

In summary, no more than 40% of the grass crop in popular corridors where the range is in good condition should be grazed. Range sites in poor or fair condition should have even less utilization. No more than 20% of the grass crop should be consumed in more pristine areas.

Tools you can use.

Now that range management school is over, here are some specific tools you can use to determine if there is enough forage for your horses, and what the appropriate utilization level is.

A Method to Estimate Available Forage

A horse collects grass one mouthful at a time, until it has consumed 26 pounds. It just so happens that a person's hand is about the same size as a horse's mouth. So ask yourself, could you with one hand pull 26 pounds dry weight of grass, in 6 hours, at this camp site. Twenty six pounds dry weight of grass is about the same size as 1/3 of a bale of hay. So look around before you unsaddle, could you collect 1/3 of a bale of hay for each animal at this site, in the 3-6 hours

they will be able to graze. Try this simple experiment at home, or in the Wilderness where you plan to camp: With one hand try to pull, break, and twist off enough grass to equal 1/3 of a bale of hay. No clippers allowed, just your bare hand.

Doing this experiment will make you look critically at the available forage. If you can not collect enough forage, then you will need to supply supplemental forage, or move on to another site. While this is not an exact method, it does discipline yourself to look at the potential campsite from the horse's point of view; and indicate if there is enough forage available. If you are searching for handfuls of grass and only finding a few blades at a time, the site is either already grazed or in poor condition. Both are situations where your choices are supplemental feed or moving on.

A Method to Measure Utilization (Grazing) Levels

What follows is a simple method you can use to measure utilization levels. This is a tool you can put right to work to see if a site has already been grazed more than 40%. Or you can determine if your string of stock may push it over the 40% level.

The "Grazed Plant Method" is a simple way to measure utilization. This is a research-based technique where the number of individual grass plants that have been grazed is converted by a chart to the approximate percentage of grass removed.

To use the method on a bunchgrass site, you wander at random through the grazing area. Every time your right foot sets down, stop and look at the individual grass plant nearest the toe of your boot. Determine if it has been grazed this year or not. Keep a tally of the grazed and ungrazed plants. Continue this random wandering until you have examined at least 100 plants. Go to the following chart and find the percentage of plants grazed. Just below this figure is the approximate percentage of grass dry weight that has been grazed from a site.

Estimation of weight utilization of all grasses by percent of grazed plants on Bunchgrass Sites

% Plants Grazed	25	30	35	40	45	50	55	60	65	70	75	80
% Utilization	10	13	18	20	22	27	30	34	40	43	50	55

If 60% of the bunchgrass plants have been grazed, approximately 34% of the grass has already been grazed. If I found a camp site that is already at this use level, I would plan on using feed I packed in or move to a new site.

Footnote: Allen Rowley served as Resource Assistant on the Spotted Bear Ranger District when he wrote this article for BCHF in 1995.

The Seven Leave No Trace Principles

1. Plan ahead and prepare.
2. Travel and camp on durable surfaces.
3. Dispose of waste properly.
4. Leave what you find.
5. Minimize campfire impacts (be careful with fire).
6. Respect wildlife.
7. Be considerate of other visitors.

When you're poorly prepared, you're more likely to run into problems. Lack of good research can lead to situations where you can become fatigued or fearful, and you may be forced to make poor choices.

1) Planning ahead includes doing research about your destination and packing appropriately.

- Know the regulations and special concerns for the area you'll visit.
- Prepare for extreme weather, hazards and emergencies.
- Schedule your trip to avoid times of high use.
- Visit in small groups when possible. Consider splitting larger groups into smaller groups.
- Repackage food to minimize waste.
- Use a map and compass to eliminate the use of marking paint, rock cairns or flagging.

2) When exploring your surroundings and setting up your picnic or overnight camp, seek out resilient types of terrain. Ideal durable surfaces include established trails and campsites, rock, gravel, dry grasses or snow.

In popular areas, frontcountry or backcountry:

- Concentrate use on existing trails and campsites.
- Camp at least 200 feet from lakes and streams.
- Keep campsites small. Focus activity in areas where vegetation is absent.
- Walk single file in the middle of the trail, even when it's wet or muddy.

In pristine areas:

- Disperse use to prevent the creation of campsites and trails.
- Avoid places where impacts are just beginning.

- 3) This principle applies to everything from litter to human waste to rinse water.**
- Pack it in, pack it out. Inspect your campsite and rest areas for trash or spilled foods. Pack out all trash, leftover food and litter. Always leave a place cleaner than you found it.
 - Deposit solid human waste in cat holes dug 6 to 8 inches deep, at least 200 feet from water, camp and trails. Cover and disguise the cat hole when finished. (Some highly impacted areas, like Muir Base Camp on Mount Rainier or riverside campsites in the Grand Canyon, require human waste to be packed out, too.)
 - Pack out toilet paper and hygiene products.
 - To wash yourself or your dishes, carry water 200 feet away from streams or lakes and use small amounts of biodegradable soap. Scatter strained dishwater.
- 4) The adage “take only pictures, leave only footprints” still holds, although leaving fewer footprints is even better.**
- Preserve the past: Examine, but do not touch, cultural or historic structures and artifacts.
 - Leave rocks, plants and other natural objects as you find them.
 - Avoid introducing or transporting non-native species: Clean boot soles, kayak hulls and bike tires off between trips.
 - Do not build structures, furniture or dig trenches.
- 5) While campfires are a timeless camping ritual, they can also be one of the most destructive ones. Far better choices include a lightweight stove for cooking and a candle lantern for light. Stargazing is an excellent alternative, and is best enjoyed when your campsite is in total darkness.**
- Where fires are permitted, use established fire rings, fire pans or mound fires.
 - Keep fires small. Use only sticks from the ground that can be broken by hand.
 - Burn all wood and coals to ash, put out campfires completely, then scatter cool ashes.
 - Don't bring firewood from home, which could introduce new pests and diseases. Buy it from a local source or gather it responsibly where allowed.
- 6) Don't approach animals. Both you and the wildlife will enjoy encounters more if you master the zoom lens on your camera and pack along a pair of binoculars.**
- Observe wildlife from a distance. Do not follow or approach them.
 - Never feed animals. Feeding wildlife damages their health, alters natural behaviors, and exposes them to predators and other dangers.
 - Protect wildlife and your food by storing rations and trash securely.
 - Control pets at all times, or leave them at home.
 - Avoid wildlife during sensitive times: mating, nesting, raising young or winter.
- 7) “Treat others the way you would like to be treated” is a rule that applies in the outdoors, too.**
- Respect other visitors and protect the quality of their experience.
 - Be courteous. Yield to other users on the trail.
 - Step to the downhill side of the trail when encountering pack stock.
 - Take breaks and camp away from trails and other visitors.
 - Let nature's sounds prevail. Avoid loud voices and noises.
 - Manage your pet.